

Project Location and Background

The Gulf, Barlow, Mattawoman, Jacobus, and Hungars Creeks watershed located in Northampton County, Virginia, consists of 5 main watersheds and 3 sub-watersheds which are direct drainages to the Chesapeake Bay. The watershed drainage is approximately 17,250 acres and land uses are predominated by agriculture (53%), forest (21%), and wetlands (17%). None of the watersheds (excluding Barlow Creek) meet water quality standards for the production of edible and marketable seafood. To address bacterial pollution in the watershed, four TMDL reports were approved by EPA between 2007 and 2010, and the Implementation Plan was approved in 2015. The 319(h)-funded project started in 2019. Other activity may have occurred since the IP completed in 2015, but that information is not available.

Implementation Highlights

DEQ awarded Accomack-Northampton Planning District Commission (ANPDC) \$66,000 for a septic improvement TMDL implementation project which began in December 2018 and will continue through December 2020. Southeast Environmental Rural Community Assistance Project (SERCAP has provided \$110,000 in match. Although these watersheds are impaired for fecal bacteria and shell fishing designated use, the public has been involved with water quality improvement education and awareness through the Phase III Watershed Implementation Process. The Eastern Shore SWCD had an increased interest in and sign-up for cover crop from producers, which will be funded through the VACS program (i.e., Department of Conservation and Recreation).

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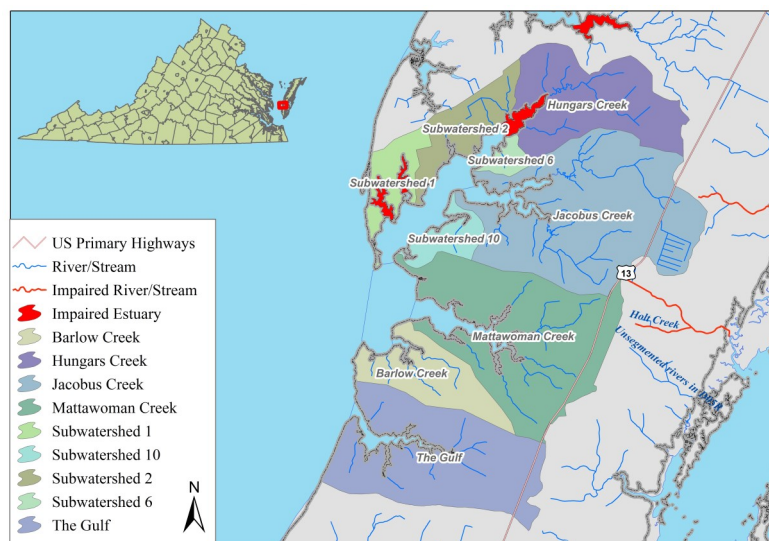


Table 1: The Gulf, Barlow, Mattawoman, Jacobus, and Hungars Creeks BMP Summary : 2015-2019

Control Measure	Units	Goal	Installed	%
Agricultural				
Stream Exclusion Fencing	S	10	0	0
Sm. Acreage Grazing System	S	6	0	0
Woodland Buffer Filter	A	102	0	0
Cover Crop	A	594	604	102
Pasture Management	A	538	0	0
Sed. Ret./Water Control	A	56	0	0
Residential Septic				
Septic Tank Pump-out	S	957	0	0
Septic System Repair	S	20	0	0
Septic System Installation	S	40	0	0
Alternative Waste Treatment System	S	14	0	0
Residential/Urban				
Rain Garden	A	45	0	0
Vegetated Buffer	A	27	0	0
Pet Waste Composter	S	328	0	0
Pet Waste Station	S	29	0	0

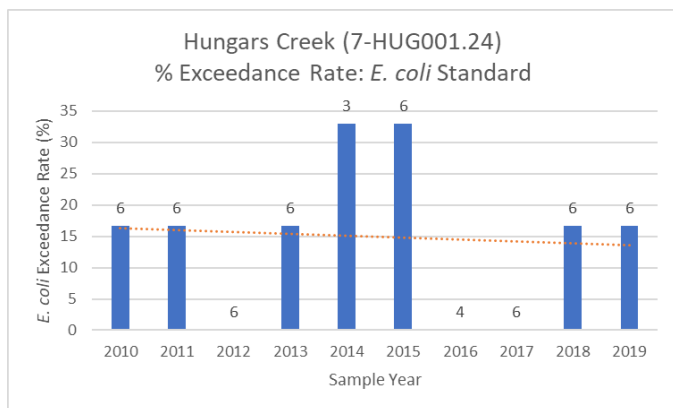
A = Acres, F = Linear Feet, S = System, P=Program; **Note:** BMP counts only include 319-funded and state VACS. NRCS EQIP funded practices are not included.

Implementation Highlights— Continued

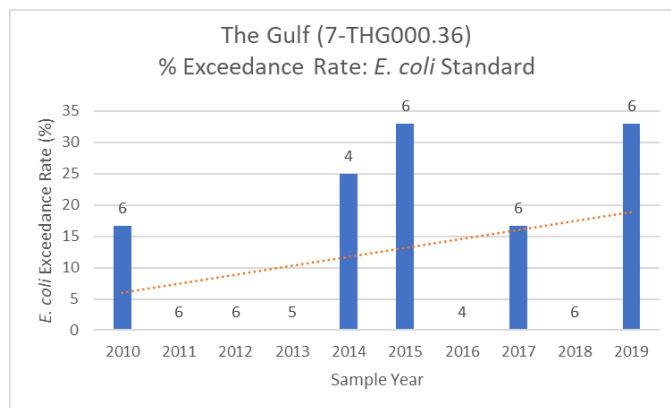
Most of the watersheds on the Bay Side of the Eastern Shore have harvesting areas with restrictions for shellfishing due to fecal bacteria pollution. The ANPDC conducted windshield surveys and interviews in 2014 to identify homes on the Bay Side of the Eastern Shore without indoor plumbing. Of the 1,266 homes surveyed, 9% lacked indoor plumbing facilities. This suggests humans are a significant source of bacteria loadings. As of June 2019, none of the septic BMPs recommended in the implementation plan had yet been implemented, but ANPDC is continuing its efforts. Thus far, focus has been mostly on outreach and awareness.

Water Quality Monitoring Results

Water quality data collected by DEQ for the period of 2010 through 2019 were analyzed at two stations in the watershed to determine long-term trends, if any, in water quality based on exceedance of the *E.coli* standard. The bar graphs below show the percent violation rate for samples collected annually at monitoring station 7-HUG001.24 in Hungars Creek and station 7-THG000.36 in The Gulf, neither of which met the water quality standard of 235 cfu/100 mL for bacteria. The number of samples collected each year is shown above each bar. The linear regression fitted to the data shows a slight decrease in bacteria violation rates in Hungars Creek and an increase in violation rates in the Gulf. Monitoring over a longer period of time following greater BMP implementation is needed to corroborate water quality changes.



Graph 1: *E.coli* data for Hungars Creek watershed (Station 7-HUG001.24), 2010-2019



Graph 2: *E.coli* data for The Gulf watershed (Station 7-THG000.36), 2010-2019

For More Information Please Contact:

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